Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A thermoelectric effect device, comprising:

~~two thermoelectric converter elements comprising~~ a first thermoelectric converter element and a second thermoelectric converter element, wherein each thermoelectric converter element comprises ~~of which is formed in order to join, by using a joint member,~~ a first electric conductor member and a second electric conductor member which have different Seebeck coefficients from each other and a joint member that joins the first electric conductor member and the second electric conductor member,

wherein the thermoelectric effect device is configured such that a side of the first electric conductor member of the first thermoelectric converter element that is opposite to the joint member of the first thermoelectric converter element is electrically connected via electric conduction material to a side of the first electric conductor member of the second thermoelectric converter element that is opposite to the joint member of the second thermoelectric converter element, wherein the side of the first electric conductor member of the first thermoelectric converter element and the side of the first electric conductor member of the second thermoelectric converter element face one another,

wherein the thermoelectric effect device is configured such that a side of the second electric conductor member of the first thermoelectric converter element that is opposite to the joint member of the first thermoelectric converter element is electrically connected via electric conduction material to a side of the second electric conductor member of the second thermoelectric converter element that is opposite to the joint member of the second thermoelectric converter element, wherein the side of the second electric conductor member of the first thermoelectric converter element and the side of the second electric conductor member of the second thermoelectric converter element face one another ~~by way of an electric conduction material, the first electric conductor member's side opposite to the joint member and the second electric conductor member's side opposite to the joint member being electrically connected, respectively, to a facing first electric conductor member's side opposite~~

~~to a facing joint member and a facing second electric conductor member's side opposite to the facing joint member~~, and

~~connecting one electric conduction material to~~ a direct current source connected in-line via electric conduction material to the first and second thermoelectric converter elements to constitute ~~constituting~~ a Peltier effect heat transfer circuit system which has an endothermic section and an exothermic section,

wherein the Peltier effect heat transfer circuit system is configured such that one of the first and second thermoelectric converter elements includes the endothermic section at a boundary between the joint member and the first electric conductor member and at a boundary between the joint member and the second electric conductor member of the one thermoelectric converter element, and an other of the first and second thermoelectric converter elements includes the exothermic section at a boundary between the joint member and the first electric conductor member and at a boundary between the joint member and the second electric conductor member of the other thermoelectric converter element,

wherein[[:]] the thermoelectric effect device is configured such that a distance is provided between the endothermic section and the exothermic section such that~~, a distance is secured for keeping~~ a temperature T_α at the endothermic section and a temperature T_β at the exothermic section maintain ~~to keep~~ a relation $T_\alpha<T_\beta$,

wherein the first thermoelectric converter element and the second thermoelectric converter element are arranged in the Peltier effect heat transfer circuit system such that the first electric conductor members and the second electric conductor members do not alternate with one another.

2. (Currently Amended) A thermoelectric effect device, comprising:

2n pieces of thermoelectric converter elements, wherein each thermoelectric converter element comprises ~~of which is formed in such a manner as to join, by using a joint member,~~ a first electric conductor member and a second electric conductor member which have different Seebeck coefficients from each other and a joint member that joins the first electric conductor member and the second electric conductor member,

wherein the thermoelectric effect device is configured such that a side of the first electric conductor member of the first thermoelectric converter element that is opposite to the

joint member of the first thermoelectric converter element is electrically connected via electric conduction material to a side of the first electric conductor member of the second thermoelectric converter element that is opposite to the joint member of the second thermoelectric converter element, wherein the side of the first electric conductor member of the first thermoelectric converter element and the side of the first electric conductor member of the second thermoelectric converter element face one another,

wherein the thermoelectric effect device is configured such that a side of the second electric conductor member of the first thermoelectric converter element that is opposite to the joint member of the first thermoelectric converter element is electrically connected via electric conduction material to a side of the second electric conductor member of the second thermoelectric converter element that is opposite to the joint member of the second thermoelectric converter element, wherein the side of the second electric conductor member of the first thermoelectric converter element and the side of the second electric conductor member of the second thermoelectric converter element face one another,

wherein ~~by way of an electric conduction material,~~ the 2n pieces of the thermoelectric converter elements are [[being]] electrically connected to each other in such a manner as to form a circuit ~~an in-line~~,

wherein the 2n pieces of the thermoelectric converter elements adjacent to each other are alternately [[being]] disposed ~~alternately~~, thus forming an endothermic section and an exothermic section, and

~~connecting at least a part of the electric conduction material to~~ a direct current source connected in-line via electric conduction material to the first and second thermoelectric converter elements to constitute ~~constituting~~ a Peltier effect heat transfer circuit system which has n piece of the endothermic section and n piece of the exothermic section,

wherein the Peltier effect heat transfer circuit system is configured such that one of the first and second thermoelectric converter elements includes the endothermic section at a boundary between the joint member and the first electric conductor member and at a boundary between the joint member and the second electric conductor member of the one thermoelectric converter element, and an other of the first and second thermoelectric converter elements includes the exothermic section at a boundary between the joint member

and the first electric conductor member and at a boundary between the joint member and the second electric conductor member of the other thermoelectric converter element,

wherein[[:]] the thermoelectric effect device is configured such that a distance is provided between the endothermic section and the exothermic section such that~~, a distance is secured for keeping~~ a temperature T_α at the endothermic section and a temperature T_β at the exothermic section maintain ~~to keep~~ a relation $T_\alpha > T_\beta$,

wherein the first thermoelectric converter element and the second thermoelectric converter element are arranged in the Peltier effect heat transfer circuit system such that the first electric conductor members and the second electric conductor members do not alternate with one another.

3. (Currently Amended) An energy direct conversion system, comprising:

~~two thermoelectric converter elements comprising~~ a first thermoelectric converter element and a second thermoelectric converter element, wherein each thermoelectric converter element comprises ~~of which is formed to join, by using a joint member,~~ a first electric conductor member and a second electric conductor member which have different Seebeck coefficients from each other and a joint member that joins the first electric conductor member and the second electric conductor member,

wherein the energy direct conversion system is configured such that a side of the first electric conductor member of the first thermoelectric converter element that is opposite to the joint member of the first thermoelectric converter element is electrically connected via electric conduction material to a side of the first electric conductor member of the second thermoelectric converter element that is opposite to the joint member of the second thermoelectric converter element, wherein the side of the first electric conductor member of the first thermoelectric converter element and the side of the first electric conductor member of the second thermoelectric converter element face one another,

wherein the energy direct conversion system is configured such that a side of the second electric conductor member of the first thermoelectric converter element that is opposite to the joint member of the first thermoelectric converter element is electrically connected via electric conduction material to a side of the second electric conductor member of the second thermoelectric converter element that is opposite to the joint member of the

second thermoelectric converter element, wherein the side of the second electric conductor member of the first thermoelectric converter element and the side of the second electric conductor member of the second thermoelectric converter element face one another ~~by way of an electric conduction material, the first electric conductor member's side opposite to the joint member and the second electric conductor member's side opposite to the joint member being electrically connected, respectively, to a facing first electric conductor member's side opposite to a facing joint member and a facing second electric conductor member's side opposite to the facing joint member~~,

wherein the first and second thermoelectric converter elements form a heat transfer circuit system which has an endothermic section and an exothermic section,

wherein the heat transfer circuit system is configured such that one of the first and second thermoelectric converter elements includes the endothermic section at a boundary between the joint member and the first electric conductor member and at a boundary between the joint member and the second electric conductor member of the one thermoelectric converter element, and an other of the first and second thermoelectric converter elements includes the exothermic section at a boundary between the joint member and the first electric conductor member and at a boundary between the joint member and the second electric conductor member of the other thermoelectric converter element,

wherein the first thermoelectric converter element and the second thermoelectric converter element are [[being]] disposed in ambient temperatures different from one another ~~each other~~, and

wherein the energy direct conversion system is configured such that ~~a distance being secured for keeping~~ an ambient temperature T1 of a [[the]] thermoelectric converter element on a high temperature side and an ambient temperature T2 of a [[the]] thermoelectric converter element on a low temperature side maintain ~~to keep~~ a relation T1>T2,

wherein[[:]] the energy direct conversion system is configured to remove ~~taking out~~ an electric potential energy from a predetermined section of the electric conduction material ~~constitutes a direct energy conversion electric circuit system converting from~~ to directly convert a heat energy into the electric potential energy,

wherein the first thermoelectric converter element and the second thermoelectric converter element are arranged in the heat transfer circuit system such that the first electric

conductor members and the second electric conductor members do not alternate with one another.

4. (Currently Amended) An energy direct conversion system, comprising:

2n pieces of thermoelectric converter elements, wherein each thermoelectric converter element comprises ~~of which is formed in such a manner as to join, by using a joint member,~~ a first electric conductor member and a second electric conductor member which have different Seebeck coefficients from each other and a joint member that joins the first electric conductor member and the second electric conductor member,

wherein the energy direct conversion system is configured such that a side of the first electric conductor member of the first thermoelectric converter element that is opposite to the joint member of the first thermoelectric converter element is electrically connected via electric conduction material to a side of the first electric conductor member of the second thermoelectric converter element that is opposite to the joint member of the second thermoelectric converter element, wherein the side of the first electric conductor member of the first thermoelectric converter element and the side of the first electric conductor member of the second thermoelectric converter element face one another,

wherein the energy direct conversion system is configured such that a side of the second electric conductor member of the first thermoelectric converter element that is opposite to the joint member of the first thermoelectric converter element is electrically connected via electric conduction material to a side of the second electric conductor member of the second thermoelectric converter element that is opposite to the joint member of the second thermoelectric converter element, wherein the side of the second electric conductor member of the first thermoelectric converter element and the side of the second electric conductor member of the second thermoelectric converter element face one another,

wherein ~~by way of an electric conduction material,~~ the 2n pieces of the thermoelectric converter elements are [[being]] electrically connected to each other in such a manner as to form a circuit ~~an in-line~~,

wherein the 2n pieces of the thermoelectric converter elements adjacent to each other are alternately [[being]] disposed ~~alternately~~, thus forming ambient temperatures different from each other, and

wherein the 2n pieces of the thermoelectric converter elements form a heat transfer circuit system which has an endothermic section and an exothermic section, wherein the heat transfer circuit system is configured such that one of the first and second thermoelectric converter elements includes the endothermic section at a boundary between the joint member and the first electric conductor member and at a boundary between the joint member and the second electric conductor member of the one thermoelectric converter element, and an other of the first and second thermoelectric converter elements includes the exothermic section at a boundary between the joint member and the first electric conductor member and at a boundary between the joint member and the second electric conductor member of the other thermoelectric converter element,

a distance being secured for keeping an ambient temperature T1 of the thermoelectric converter element on a high temperature side and an ambient temperature T2 of the thermoelectric converter element on a low temperature side to keep a relation T1>T2,

wherein the first thermoelectric converter element and the second thermoelectric converter element are arranged such that the first electric conductor members and the second electric conductor members do not alternate with one another,

wherein[[:]]the energy direct conversion system is configured to remove ~~taking out~~ an electric potential energy from a predetermined ~~certain~~ section of the electric conduction material to ~~constitutes a direct energy conversion electric circuit system converting from~~ directly convert a heat energy into the electric potential energy,

wherein the first thermoelectric converter element and the second thermoelectric converter element are arranged in the heat transfer circuit system such that the first electric conductor members and the second electric conductor members do not alternate with one another.

5. (Previously Presented) The energy direct conversion system, as claimed in claim 3, wherein,

the energy direct conversion system further comprises:

at least a pair of the direct energy conversion electric circuit systems, and

a plurality of starting sections using a temperature difference attributable to one of an initial external heating and an initial external cooling,

wherein:

the energy direct conversion system converts a heat energy source directly into the electric potential energy, wherein the heat energy source is in different ambient temperatures in different places independent of each other.

6. (Previously Presented) An energy conversion system wherein the energy conversion system converts the electric potential energy into a chemical potential energy through an electrolization, the electric potential energy being obtained from the heat energy direct conversion system as claimed in claim 3.

7. (Previously Presented) An energy conversion system wherein the energy conversion system converts the electric potential energy into a chemical potential energy through an electrolization, the electric potential energy being obtained from the heat energy direct conversion system as claimed in claim 4.

8. (Currently Amended) The [[An]] energy direct conversion system, as claimed in claim 3, wherein the energy direct conversion system further comprises: ~~comprising:~~

a thermoelectric effect device comprising[[:]] the first and second thermoelectric converter elements, and

~~two thermoelectric converter elements comprising a first thermoelectric converter element and a second thermoelectric converter element each of which is formed in such a manner as to join, by using a joint member, a first electric conductor member and a second electric conductor member which have different Seebeck coefficients from each other,~~

~~by way of an electric conduction material, the first electric conductor member's side opposite to the joint member and the second electric conductor member's side opposite to the joint member being electrically connected, respectively, to a facing first electric conductor member's side opposite to a facing joint member and a facing second electric conductor member's side opposite to the facing joint member, and~~

~~connecting one electric conduction material to~~ a direct current source connected in-line via electric conduction material to the first and second

thermoelectric converter elements to constitute ~~constituting~~ a Peltier effect heat transfer circuit system which has an endothermic section and an exothermic section,

wherein the energy direct conversion system is configured such that a distance is provided between the endothermic section and the exothermic section~~, a distance is secured for keeping~~ such that a temperature T_α at the endothermic section and a temperature T_β at the exothermic section maintain ~~to keep~~ a relation $T_\alpha<T_\beta$,

wherein the energy direct conversion system obtains the electric potential energy by supplying to the energy direct conversion system ~~as claimed in claim 3~~ the heat energy obtained from the thermoelectric effect device, and [[that]]

wherein the energy direct conversion system is configured to use [[uses]] a part of the electric potential energy as a direct current source by feeding back ~~feedbacking the~~ part of the electric potential energy to the thermoelectric effect device.

9. (Currently Amended) The [[An]] energy direct conversion system~~, comprising:~~ as claimed in claim 4, wherein the energy direct conversion system further comprises:

a thermoelectric effect device comprising[[:]] the first and second thermoelectric converter elements,

~~two thermoelectric converter elements comprising a first thermoelectric converter element and a second thermoelectric converter element each of which is formed in such a manner as to join, by using a joint member, a first electric conductor member and a second electric conductor member which have different Seebeck coefficients from each other,~~

~~by way of an electric conduction material, the first electric conductor member's side opposite to the joint member and the second electric conductor member's side opposite to the joint member being electrically connected, respectively, to a facing first electric conductor member's side opposite to a facing joint member and a facing second electric conductor member's side opposite to the facing joint member~~, and

~~connecting one electric conduction material to~~ a direct current source connected in-line via electric conduction material to the first and second thermoelectric converter elements to constitute ~~constituting~~ a Peltier effect heat transfer circuit system which has an endothermic section and an exothermic section,

wherein[[:]] the energy direct conversion system is configured such that a distance is provided between the endothermic section and the exothermic section such that~~, a distance is secured for keeping~~ a temperature T_α at the endothermic section and a temperature T_β at the exothermic section maintain ~~to keep~~ a relation $T_\alpha<T_\beta$,

wherein[[:]] the energy direct conversion system obtains the electric potential energy by supplying to the energy direct conversion system ~~as claimed in claim 4~~ the heat energy obtained from the thermoelectric effect device, and [[that]]

wherein the energy direct conversion system is configured to use [[uses]] a part of the electric potential energy as a direct current source by feeding back ~~feedbacking~~ the part of the electric potential energy to the thermoelectric effect device.

10. (Currently Amended) The [[An]] energy direct conversion system as claimed in claim 5, ~~comprising:~~ wherein the energy direct conversion system further comprises:

a thermoelectric effect device comprising[[:]]the first and second thermoelectric converter elements,

~~two thermoelectric converter elements comprising a first thermoelectric converter element and a second thermoelectric converter element each of which is formed in such a manner as to join, by using a joint member, a first electric conductor member and a second electric conductor member which have different Seebeck coefficients from each other,~~

~~by way of an electric conduction material, the first electric conductor member's side opposite to the joint member and the second electric conductor member's side opposite to the joint member being electrically connected, respectively, to a facing first electric conductor member's side opposite to a facing joint member and a facing second electric conductor member's side opposite to the facing joint member~~, and

~~connecting one electric conduction material to~~ a direct current source connected in-line via electric conduction material to the first and second thermoelectric converter elements to constitute ~~constituting~~ a Peltier effect heat transfer circuit system which has an endothermic section and an exothermic section, ~~the thermoelectric effect device characterized in that:~~

wherein the thermoelectric effect device is configured such that a distance is provided between the endothermic section and the exothermic section such that~~, a distance is secured for keeping~~ a temperature T_α at the endothermic section and a temperature T_β at the exothermic section maintain ~~to keep~~ a relation $T_\alpha > T_\beta$,

~~the energy conversion system characterized in that:~~

wherein the energy direct conversion system obtains electric potential energy by supplying to the energy direct conversion system ~~as claimed in claim 5~~ the heat energy obtained from the thermoelectric effect device, and [[that]]

wherein the energy direct conversion system is configured to use [[uses]] a part of the electric potential energy as a direct current source by feeding back ~~feedbacking~~ the part of the electric potential energy to the thermoelectric effect device.

11. (Currently Amended) The [[An]] energy direct conversion system as claimed in claim 3, ~~comprising:~~ further comprising:

a thermoelectric effect device comprising[[:]]the first and second thermoelectric converter elements, and

~~2n pieces of thermoelectric converter elements each of which is formed in such a manner as to join, by using a joint member, a first electric conductor member and a second electric conductor member which have different Seebeck coefficients from each other,~~

~~by way of an electric conduction material, the 2n pieces of the thermoelectric converter elements being electrically connected to each other in such a manner as to form an in-line,~~

wherein ~~the 2n pieces of the~~ thermoelectric converter elements adjacent to each other are [[being]] disposed alternately, thus forming the [[an]] endothermic section and the [[an]] exothermic section, and

~~connecting at least a part of the electric conduction material to~~ a direct current source connected in-line via electric conduction material to the first and second thermoelectric converter elements to constitute ~~constituting~~ a Peltier effect heat transfer circuit system which has n piece of the endothermic section and n piece of the exothermic section,

~~the thermoelectric effect device characterized in that:~~

wherein the energy direct conversion system is configured such that a distance is provided between the endothermic section and the exothermic section such that~~, a distance is secured for keeping~~ a temperature T_α at the endothermic section and a temperature T_β at the exothermic section maintain ~~to keep~~ a relation $T_\alpha<T_\beta$,

wherein the energy direct conversion system is configured to obtain ~~characterized in that: the energy conversion system obtains~~ electric potential energy by supplying to the energy direct conversion system ~~as claimed in claim 3~~ the heat energy obtained from the thermoelectric effect device, and [[that]]

wherein the energy direct conversion system is configured to use [[uses]] a part of the electric potential energy as a direct current source by feeding back ~~feedbacking~~ the part of the electric potential energy to the thermoelectric effect device.

12. (Currently Amended) The [[An]] energy direct conversion system as claimed in claim 4, further comprising:

a thermoelectric effect device comprising[[:]] the first and second thermoelectric converter elements, and

~~2n pieces of thermoelectric converter elements each of which is formed in such a manner as to join, by using a joint member, a first electric conductor member and a second electric conductor member which have different Seebeck coefficients from each other,~~

~~by way of an electric conduction material, the 2n pieces of the thermoelectric converter elements being electrically connected to each other in such a manner as to form an in-line,~~

~~the 2n pieces of the thermoelectric converter elements adjacent to each other being disposed alternately, thus forming an endothermic section and an exothermic section, and~~

~~connecting at least a part of the electric conduction material to~~ a direct current source connected in-line via electric conduction material to the first and second thermoelectric converter elements to constitute ~~constituting~~ a Peltier effect heat transfer circuit system which has n piece of the endothermic section and n piece of the exothermic section,

~~the thermoelectric effect device characterized in that:~~

wherein the thermoelectric effect device is configured such that a distance is provided between the endothermic section and the exothermic section such that~~, a distance is secured~~

~~for keeping~~ a temperature T_α at the endothermic section and a temperature T_β at the exothermic section maintain ~~to keep~~ a relation $T_\alpha > T_\beta$,

~~the energy conversion system characterized in that:~~

wherein the energy direct conversion system is configured to obtain ~~obtains~~ electric potential energy by supplying to the energy direct conversion system ~~as claimed in claim 4~~ the heat energy obtained from the thermoelectric effect device, and [[that]] the energy direct conversion system is configured to use [[uses]] a part of the electric potential energy as a direct current source by feeding back ~~feedbacking~~ the part of the electric potential energy to the thermoelectric effect device.

13. (Currently Amended) The [[An]] energy direct conversion system as claimed in claim 5, further comprising:

a thermoelectric effect device comprising[[:]]the first and second thermoelectric converter elements,

~~2n pieces of thermoelectric converter elements each of which is formed in such a manner as to join, by using a joint member, a first electric conductor member and a second electric conductor member which have different Seebeck coefficients from each other,~~

~~by way of an electric conduction material, the 2n pieces of the thermoelectric converter elements being electrically connected to each other in such a manner as to form an in-line,~~

wherein [[the]] 2n pieces of the thermoelectric converter elements adjacent to each other are [[being]] disposed alternately, thus forming the [[an]] endothermic section and the [[an]] exothermic section, and

~~connecting at least a part of the electric conduction material to~~ a direct current source in-line via electric conduction material to the first and second thermoelectric converter elements to constitute ~~constituting~~ a Peltier effect heat transfer circuit system which has n piece of the endothermic section and n piece of the exothermic section,

~~the thermoelectric effect device characterized in that:~~

wherein the thermoelectric effect device is configured such that a distance is provided between the endothermic section and the exothermic section such that~~, a distance is secured~~

~~for keeping~~ a temperature T_α at the endothermic section and a temperature T_β at the exothermic section maintain ~~to keep~~ a relation $T_\alpha<T_\beta$,

~~the energy conversion system characterized in that:~~

wherein the energy direct conversion system is configured to obtain ~~obtains~~ electric potential energy by supplying to the energy direct conversion system ~~as claimed in claim 5~~ the heat energy obtained from the thermoelectric effect device, and [[that]]

wherein the energy direct conversion system is configured to use [[uses]] a part of the electric potential energy as a direct current source by feeding back ~~feedbacking~~ the part of the electric potential energy to the thermoelectric effect device.

14. (Original) The energy conversion system as claimed in claim 8, wherein the feedback of the electric potential energy is controlled by turning on and off a switch.

15. (Original) The energy conversion system as claimed in claim 9, wherein the feedback of the electric potential energy is controlled by turning on and off a switch.

16. (Original) The energy conversion system as claimed in claim 10, wherein the feedback of the electric potential energy is controlled by turning on and off a switch.

17. (Original) The energy conversion system as claimed in claim 11, wherein the feedback of the electric potential energy is controlled by turning on and off a switch.

18. (Original) The energy conversion system as claimed in claim 12, wherein the feedback of the electric potential energy is controlled by turning on and off a switch.

19. (Original) The energy conversion system as claimed in claim 13, wherein the feedback of the electric potential energy is controlled by turning on and off a switch.

20. (Previously Presented) The energy conversion system as claimed in claim 8, wherein the feedback of the electric potential energy is controlled by turning on and off a switch, so that the electric potential energy is supplied to the thermoelectric effect device and that an electric power from the direct current source of the thermoelectric effect device is cut.

21. (Previously Presented) The energy conversion system as claimed in claim 9, wherein the feedback of the electric potential energy is controlled by turning on and off a switch, so that the electric potential energy is supplied to the thermoelectric effect device and that an electric power from the direct current source of the thermoelectric effect device is cut.

22. (Previously Presented) The energy conversion system as claimed in claim 10, wherein the feedback of the electric potential energy is controlled by turning on and off a switch, so that the electric potential energy is supplied to the thermoelectric effect device and that an electric power from the direct current source of the thermoelectric effect device is cut.

23. (Previously Presented) The energy conversion system as claimed in claim 11, wherein the feedback of the electric potential energy is controlled by turning on and off a switch, so that the electric potential energy is supplied to the thermoelectric effect device and that an electric power from the direct current source of the thermoelectric effect device is cut.

24. (Previously Presented) The energy conversion system as claimed in claim 12, wherein the feedback of the electric potential energy is controlled by turning on and off a switch, so that the electric potential energy is supplied to the thermoelectric effect device and that an electric power from the direct current source of the thermoelectric effect device is cut.

25. (Previously Presented) The energy conversion system as claimed in claim 13, wherein the feedback of the electric potential energy is controlled by turning on and off a switch, so that the electric potential energy is supplied to the thermoelectric effect device and that an electric power from the direct current source of the thermoelectric effect device is cut.

26. (Cancelled)

27. (Cancelled)

28. (Previously Presented) An energy conversion system wherein the energy conversion system converts the electric potential energy into a chemical potential energy through the electrolization, the electric potential energy being obtained from the energy conversion system as claimed in claim 8.

29. (Previously Presented) An energy conversion system wherein the energy conversion system converts the electric potential energy into a chemical potential energy through the electrolization, the electric potential energy being obtained from the energy conversion system as claimed in claim 9.

30. (Previously Presented) An energy conversion system wherein the energy conversion system converts the electric potential energy into a chemical potential energy through the electrolization, the electric potential energy being obtained from the energy conversion system as claimed in claim 10.

31. (Previously Presented) An energy conversion system wherein the energy conversion system converts the electric potential energy into a chemical potential energy through the electrolization, the electric potential energy being obtained from the energy conversion system as claimed in claim 11.

32. (Previously Presented) An energy conversion system wherein the energy conversion system converts the electric potential energy into a chemical potential energy through the electrolization, the electric potential energy being obtained from the energy conversion system as claimed in claim 12.

33. (Previously Presented) An energy conversion system wherein the energy conversion system converts the electric potential energy into a chemical potential energy through the electrolization, the electric potential energy being obtained from the energy conversion system as claimed in claim 13.

34. (Currently Amended) The thermoelectric effect device of claim 1, wherein two first electric conductor members ~~with a same Seebeck coefficient~~ are arranged in series in an electrical circuit formed by the first and second thermoelectric converter elements without an intervening second electric conductor member having a different Seebeck coefficient than the first electric conductor members,

wherein two second electric conductor members ~~with a same Seebeck coefficient~~ are arranged in series in the electrical circuit without an intervening first electric conductor member having a different Seebeck coefficient than the second electric conductor members.